

BLANK PAGE



Indian Standard SPECIFICATION FOR RUGBY BALL

UDC 685.633.3



© Copyright 1970

INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 1

Indian Standard SPECIFICATION FOR RUGBY BALL

Sports Goods Sectional Committee, CPDC 4

Chairman

Representing

COL B. S. JASWAL

The National Institute of Sports, Patiala

Members

SHRI JAGMOHAN SINGH (Alternate to

Col B. S. Jaswal)

SHRI PRITHVI RAJ ABROL

The Amateur Athletic Federation of India, New Delhi The Sports Goods Export Promotion Council, New Delhi

SHRI D. N. BUDHRAJA (Alternate)

SHRI R. N. BANERJEE

SHRI A. S. BHATIA

SHRI BALWANT SINGH

Symonds & Co Private Ltd, Allahabad All India Sports Manufacturers Federation (Regd),

Meerut

SHRI K. L. KAWATRA (Alternate) SHRI M. L. BHATTACHARYYA

SHRI B. B. CHAKI (Alternate)

SHRI B. B. CHAKRAVERTI

Directorate of Industries, Government of West Bengal

Superintendence Company of India (Private) Ltd, Calcutta

Lakshmibai College of Physical Education, Gwalior

All-India Council of Sports (Ministry of Éducation)

Directorate of Industries, Government of Uttar

SHRI T. K. GHOSH (Alternate) SHRI S. D. CHOPDE

DEPUTY EDUCATIONAL ADVISER, Youth Services Division

SHRI MALIK RAM DEWAN

WG CDR R. S. DHINDSA LT KEHAR SINGH (Alternate)

SHRI N. C. JAIN SHRI S. N. SHARMA (Alternate) SHRI H. B. SINGH KALRA

SHRI PREM PANDHI

REPRESENTATIVE

Forest Research Institute & Colleges, Dehra Dun

Services Sport Control Board, New Delhi

Directorate of Industries, Government of Punjab In personal capacity (The Metal Box Company of India Ltd, New Delhi)

The Federation of Sports Industries, Jullundur

SHRI HARNAM SINGH JOLLY (Alternate)

Industries & Commerce Directorate, Government of REPRESENTATIVE Jammu & Kashmir

Pradesh

SHRI TRILOKI NATH KOUL (Alternate)

(Continued on page 2)

STANDARDS INSTITUTION INDIAN MANAK BHAVAN. 9 BAHADUR SHAH ZAFAR MARG

NEW DELHI 1

IS: 5535 - 1969

(Continued from page 1)

Members

Representing

SHRI H. R. SHARMA

SHRI G. S. SIVIA

SHRI S. SRIRAMAN SHRI A. N. GHOSE (Alternate)

SHRI A. B. RAO, Director (Consr Prod)

SECRETARY, RAILWAY SPORTS Railway Sports Control Board, New Delhi CONTROL BOARD

Office of the Development Commissioner, Small Scale Industries, New Delhi

Inter-University Sports Board of India & Ceylon, New Delhi

The Board of Control for Cricket in India, Madras

Director General, ISI (Ex-officio Member)

Secretary

SHRI R. I. MIDHA

Deputy Director (Consr Prod), ISI

Footballs, Volleyballs, Basketballs and Water Polo Balls Subcommittee, CPDC 4:1

Convener

SHRI H. B. SINGH KALRA

Directorate of Industries, Government of Punjab

Members

SHRI H. S. BHAIZADA SHRI B. B. CHAKI SHRI P. S. CHOPRA

SHRI P. N. GUPTA SHRI RAJ KUMAR JAIN

Shri H. S. Jolly SHRI A. R. KAPOOR

SHRI H. R. GADI (Alternate) SHRI RAJ KUMAR KHANNA

SHRI VIJAY KUMAR KHARBANDA SHRI RAVINDER SINGH

SHRI K. D. THAPAR

Bhaizada & Sons, Jullundur Directorate of Industries, Government of West Bengal Weston Corporation, Jullundur City

Federation of Sports Industries, Jullundur City

ENKAY Rubber Mills, Delhi Robinson Sports, Jullundur

Directorate of Industries, Government of Uttar Pradesh

Khanna Sports Industries, Meerut Federation of Sports Industries, Juliundur

SHRI SATYA PARAKASH MAHAJAN Delhi Sports Goods Manufacturers Association, Delhi Pioneer Rubber Mills (Bombay) Private Limited, Bombay

The National Institute of Sports, Patiala

SHRI GURBAKSH SINGH (Alternate)

Indian Standard SPECIFICATION FOR RUGBY BALL

0. FOREWORD

- **0.1** This Indian Standard was adopted by the Indian Standards Institution on 23 December 1969, after the draft finalized by the Sports Goods Sectional Committee had been approved by the Consumer Products Division Council.
- **0.2** This standard is one of a series of Indian Standards on sports goods, prepared on the recommendations of the Sports Goods Export Promotion Council, New Delhi. Other standards published so far in the series are given at page 8.
- **0.3** In preparing this standard, rules and regulations of the game accepted internationally have been adhered to while giving due consideration to the manufacturing and testing practices prevalent in the country and abroad. Any change occurring in these rules and regulations, will immediately be taken care of by this Sectional Committee in consultation with the national controlling body of the game in the country.
- **0.4** This standard contains clauses which call for agreement between the purchaser and the supplier and which permit the purchaser to use his option for selection to suit his requirements. The relevant clauses are **2.1.1**, **2.1.3**, **2.4** and **5.1**.
- **0.5** For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS:2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard covers the requirements of rugby balls. It does not cover bladders used for these balls.

^{*}Rules for rounding off numerical values (revised).

2. GENERAL REQUIREMENTS

2.1 Material

2.1.1 Leather — The balls shall be made from butt or bend portion of tight textured cowhide leather free from flay cuts and grain defects, vegetable tanned or semi-chrome tanned; dyed or pigmented as agreed to between the purchaser and the supplier. But at the end of tanning operation and before drying, suitable fungicides shall be incorporated into the leather for promoting resistance to mould growth in the leather and these shall be effective and non-toxic. The tanned leather shall be substantially fat-liquored and grain finished smooth.

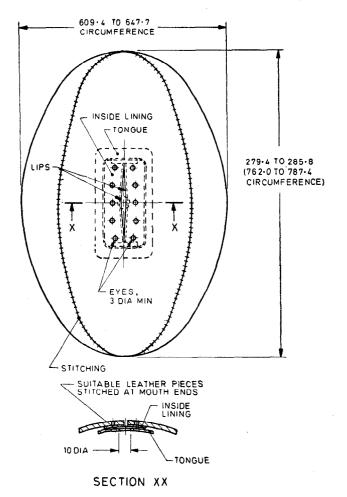
Note — Reference is invited to specification IS: 3985-1966* which deals with leather for rugby ball. It is recommended that this should be used increasingly so that change-over may be effected in due course of time.

- 2.1.2 Thread for Stitching—Rot-proofed, 5 or 6 ply linen thread shall be used for stitching. This shall have a minimum breaking strength of 28 kgf when tested on 60 cm gauge length.
- 2.1.3 Lace—The balls designed to have laces shall be supplied with suitable length of cotton or leather laces, as required by the purchaser and these shall comply with the requirements given below.
- 2.1.3.1 Cotton lace shall be of suitable braids and it shall have a minimum breaking strength of 68 kgf on a 18 cm gauge length.
- 2.1.3.2 Leather lace shall be made from suitable leather and shall have a minimum breaking strength of 19 kgf on a 18 cm gauge length.
- **2.2 Size and Shape**—When inflated to the desired air pressure, it shall have shape and dimensions as shown in Fig. 1 and 2.
- 2.3 Weight—The weight of ball, complete with bladder and in inflated condition, shall be 383 to 425 g.
- 2.4 Colour—The colour of the balls shall be as required by the purchaser.

3. CONSTRUCTION AND WORKMANSHIP

- **3.1** The balls shall be made from four panels (or more) of material capable of giving overall shape as shown in Fig. 1.
- 3.2 Stitching—The balls shall be well-stitched with 22 to 25 stitches per decimetre, the stitches being well stretched. When the ball is inflated to the desired air pressure, the threads that are visible shall be not more than 2 mm deep from the surface of the ball.

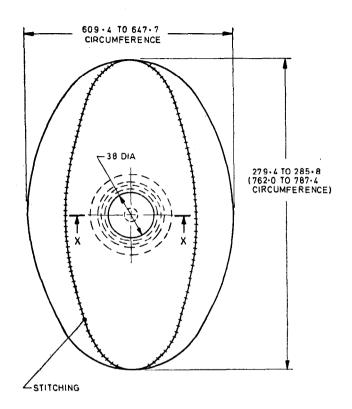
^{*}Specification for leather for rugby ball.

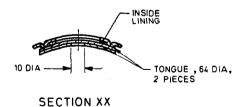


Note — This figure is intended to show constructional details of mouth only and shall not be taken to represent other features of the ball.

All dimensions in millimetres.

FIG. 1 RUGBY BALL WITH LACES





Note — This figure is intended to show constructional details of mouth only and shall not be taken to represent other features of the ball.

All dimensions in millimetres.

Fig. 2 Rugby Ball, Round Mouth

- 3.3 Mouth Construction of the mouth of the balls with laces shall generally be in accordance with details shown in Fig. 1. The construction of round shaped mouth balls shall generally be in accordance with details shown in Fig. 2. When balls are made without laces and supplied with bladders fitted, the mouth shall be adequate to permit the nozzle or needle of the inflating pump to be accommodated and suitable means provided to deflate the ball. The neck of the bladder shall be completely inside the mouth. The size of the mouth shall be 65 to 80 mm in case of balls with laces. The lips shall be reinforced with leather lining inside. The mouth shall be welted and further reinforced by stitching leather pieces to avoid tearing on the sides.
- 3.4 Eyes for Lace The eyes for lace shall have the size (3 mm dia) in case of balls with laces as shown in the fig. 1.
- **3.5 Tongue**—The balls with laces shall have tongue (size 100×50 mm) stitched to one side of the mouth covering eyelets. Further, the tongue shall have bevelled edges. To allow the neck of the bladder to go through, a hole of size 10 mm shall be provided in tongue.

4. MARKING

- **4.1** Each ball shall be marked with manufacturer's name, registered trademark and the words 'made in India' indelibly and legibly.
 - 4.1.1 The balls may also be marked with the ISI Certification Mark.

Note — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act, and the Rules and Regulations made thereinder. Presence of this mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard, under a well-defined system of inspection, testing and quality control during production. This system, which is devised and supervised by ISI and operated by the producer, has the further safeguard that the products as actually marketed are continuously checked by ISI for conformity to the standard. Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

5. PACKING

5.1 The balls shall be packed as agreed to between the purchaser and the manufacturer.

INDIAN STANDARDS

ON

Sports Goods

IS:						Rs
414-1965	Guts for tennis, badminton	and squash racket	s (revised)			1.00
415-1963	Shuttlecocks (revised)	_			•••	2 ·00
416-1963	Cricket and hockey balls (r	evised)				1.50
417-1969	Footballs, volleyballs, netba		sketballs, a	nd wate	r polo	
007 1066	balls (second revision)		···	•••	•••	3 ·50
827-1966	Sinew guts for tennis and b		(revised)	• • •	•••	1.50
828-1966	Cricket bats (revised)	•••	•••	•••	•••	1.50
829-1965	Hockey sticks (revised)		•••	•••	•••	1.50
830-1966	Tennis racket frames (revise		•••	• • •	•••	2.00
831-1966	Badminton racket frames (• • •	•••	2.00
2205-1962	Tube inflated football blade	lers	•••		• • •	1.00
2216-1962	Tennis balls	***		• • •	•••	1.50
2459-1963	Horizontal bars used in gyn	nnastics		•••	•••	1.00
2460-1963	Pommelled horse, vaulting l		buck used	in gymr	nastics	1.50
2461-1963	Balancing beams used in gy		•••			1.00
2462-1963	Parallel bars used in gymna	stics				1.00
2463-1963	Rings used in gymnastics					1.00
2578-1963	Squash racket frames					1.50
2719-1964	Carrom boards					1.50
2746-1964	Spring boards					1.00
3345-1965	Sports nets	***				1.00
3659-1966	Table tennis balls				•••	1.50
3785-1966	Wicket keeping gauntlets					1.50
3800-1966	Batting gloves		•••			1.50
3874-1966	Boxing gloves		•••			2.00
3923-1966	Leg-guards for cricket ba			hockey		
	keepers	•	•••		٠	2.50
4141-1967	Table tennis rackets	•••				2.50
4142-1967	Discus	•••	•••			2.50
4143-1967	Carrom-draughts	•••	•••			2.50
4144-1967	Carrom-strikers	•••	•••		,	2.00
4385-1967	Throwing hammers	•••	•••			3.50
4386-1967	Putting shots	•••	•••			2.50
4387-1967	Asymmetric bars	•••	•••		•••	4.00
4613-1968	Javelins	•••	•••		•••	2.50
4614-1968	Hurdles	•••	•••		•••	2.50
4630-1968	Barbell set					2.00
4973-1968	Badminton woollen balls	•••	•••			1.50
4979-1968	Table tennis tables		•••			2.50
4980-1968	C1 1 . T . 1'	***		•••		2.00
5172-1969	TO 1 ' 1 1 1 .	•••	•••	•••	•••	2.00
5172-1909	TAT 11 1	•••	•••	•••	•••	2.00
5174-1969	T 11	•••	•••	•••	•••	2 :00
_::::::::::::::::::::::::::::::::::::::		•••	•••		•••	2 ·50
5196-1969	Chest expanders	lards	•••	•••	•••	2 ·50
5214-1969	Jumping and vaulting stand		•••	•••	•••	3 ·00
5458-1969	Rounders ball	***	•••	•••	(under	
5459-1969	Base ball	•••	•••	•••	(under p	
5460-1969	Soft ball				i unuer i	Drill (

PUBLICATIONS OF INDIAN STANDARDS INSTITUTION

INDIAN STANDARDS

Over 5500 Indian Standards, broadly classified under the following main heads, have been issued so far:

Agriculture & Food Chemical Civil Engineering Consumer Products Electrotechnical Mechanical Engineering Structural & Metals Textile

Of these, the standards belonging to the Consumer Products Group fall under the following categories:

Anaesthesia, Resuscitation &
Allied Equipment
Artificial Limbs
Coir
Dental Equipment and Instruments
Domestic Hardware
Fasteners for Consumer Goods
Fountain Pens and Ball Point Pens
Gas Burning Appliances

Hospital Equipment
Hospital Utensils
Medical Glass Instruments
Oil Burning Appliances
Safety Matches
Sports Goods
Surgical Instruments and
Dressings
Umbrellas
Utensils and Cutlery

OTHER PUBLICATIONS

			Rs
ISI Bulletin (Published Every Month)			The company of the last
Single Copy	***		3-00
Annual Subscription		444	25:00
Annual Reports (from 1948-49 Onwards)			2.00 to 3.00 each

Handbook of ISI Publications, 1969 (Pages vi + 546, Price Rs 10.00)
Incorporating annotations on all Indian Standards, and also listing
ISO Recommendations and Publications of IEC

Available from

INDIAN STANDARDS INSTITUTION

Headquarters

Manak Bhavan, 9 Bahadur Shah Zafar Marg. New Delhi 1

Telephones 27 36 11 - 20 27 50 31 - 40 Telegrams Manaksanstha

Branch Offices Telegrams Manaksanstha

Syndicate Bank Building, Gandhinagar	Bangalore 9	Telephone	2 76 49
534 Sardar Vallabhbhai Patel Road	Bombay 7		35 69 44
5 Chowringhee Approach	Calcutta 13		23-08 02
5-9-201/2 Chirag All Lane	Hyderabad 1	**	5 34 35
117/418 B Sarvodaya Nagar	Kanpur 5	.,	82 72
54 General Patters Road	Madras 2	.,	8 72 78